

REMARKS

The Office action dated February 24, 2006, has been carefully reviewed and the foregoing amendment has been made in response thereto.

Claims 1-16, 37 and new claim 38 are presented for examination.

Claim 37 stands rejected under 35 U.S.C. 102(b) as anticipated by Babin et al. (U.S. 5,825,176). Claim 37 has been amended to more specifically define the method over Babin. Claim 37 includes the steps of locating the second component between a sensor and a target component such that a path between the target component and the sensor is continuously blocked by a second component. In the Babin device the second component 308 is formed with multiple openings or apertures, which open a path between the target and the sensor. Claim 37 has been further amended to include the step of rotating the second component between the sensor and the target component. Furthermore, Claim 37 has been amended to include the step of forming the second component of material having low magnetic permeability. Component 308 of Babin is of low carbon steel, a material having high magnetic permeability. The relative magnetic permeability of 1010 carbon steel is about 3,800, according to the ASM Handbook. The relative magnetic permeability of the second component is about 25.

Claims 13-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Babin in view Goossens (U.S. 4,721,864). Claim 13 recites a second component of low magnetic permeability that is mounted for rotation between the target and the sensor. The housing 5 of the Goossens device is a non-magnetic housing containing a magnetic core and a coil. Housing 5 is a cover; it does not rotate. The measuring wheel 1 rotates instead.

Claim 13 recites that the second component is formed of material having a low magnetic permeability. Babin's component 308 is of carbon steel, which has high magnetic permeability.

Further, the Office action acknowledges that component 308 of Babin does not continuously cover a path between the sensor and the target. Goossens was cited for

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disclosing a housing 5. But Claim 13 also recites that the second component is supported for rotation between the target component and the sensor and is formed of material having high magnetic permeability. The Goossens cover 5 is not rotatably supported. In the Goossens device, only the toothed wheel 1 rotates about axis M. Claims 13-15, as amended, are patentably distinguished over the cited prior art references, and are neither taught nor suggested by the combination that would result by combining Babin and Goossens.

Claims 1-3 and 6-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Babin in view of Goossens "as applied to Claim 1," and further in view of applicant's admissions (AA). Claim 1 has not been dealt with in the Office Action prior to this rejection under 35 U.S.C. 103(a). Claim 1, as amended, recites that the second component, which is interposed between the sensor and target is supported for rotation between the target and sensor and is formed of a material having a relative magnetic permeability equal to or less than 25.0. In the Goossens device the component that is interposed between the sensor and the rotating wheel, housing 5, is non-rotating. In the Babin device, component 308 is formed of carbon steel which has a high relative magnetic permeability, much greater than 25.0 as recited in Claim 1. Neither Goossens or Babin teach or suggest a rotating component interposed between the sensor and the target that has a low relative magnetic permeability and continuously covers the view of the sensor to the target.

Claims 2-12 which depend from Claim 1 and add limitations to Claim 1 are patentably distinguished over the cited prior art references. A combination that would result from Goossens and Babin neither teaches nor suggests the apparatus defined by Claim 1, and 2-12.

Claim 16 stands rejected, apparently under 35 U.S.C. 103(a) as unpatentable over Babin in view of Goossens and further in view of applicant's admission.

Claim 16 has been amended to recite that the second component is supported for rotation between the target component and the sensor, and is formed of material having a relative magnetic permeability equal to or less than 25.0. The housing 5 of Goossens is not supported for rotation, but is stationary providing a cover

for the sensor. In the Goossens device, only the toothed wheel 1 rotates. In the Babin's , component 308 rotates, but it is formed of carbon steel having a relatively high magnetic permeability, approximately 4,000. Claim 16, as amended, recites that the second component continuously blocks a path to the target component from a magnetic flux source, is supported for rotation between the target and the sensor, and is formed of material having a relative magnetic permeability equal to or less than 25.0. In the Babin device, component 308 is formed of carbon steel whose relative magnetic permeability is about 3,800. Further, component 308 does not continuously block a path from the magnetic source to the target. In the Goossens device housing 5 does not rotate. Claim 16 defines a system that is neither taught nor suggested by Goossens and Babin or a combination that might result by combining Goossens and Babin.

It is important to understand that a skilled practitioner would have no reason to combine Goossens and Babin. Goossens teaches a magnetic flux source located in the sensor 4, which is located in housing 5. As wheel 1 passes before the sensor, a speed signal may be produced. The Babin's device requires locating north and south poles of permanent magnets on the target 304. The toothed wheel of Goossens contains no permanent magnets and cannot be substituted for the target wheel 304 of Babin because the resulting combination would not operate with the low carbon steel aperture second component 308.

In view of the foregoing amendment and remarks, claims 1-16, 37 and 38 are patentably distinguished over the cited prior art references and appear now in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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